



## NUCLEAR REGULATORY COMMISSION

[Docket No. 52-049; NRC-2020-0088]

**Oklo Power LLC, a subsidiary of Oklo Inc.; Oklo Aurora Combined License**

**Application Idaho National Laboratory**

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Combined license application; denial, opportunity to demand a hearing and to petition for leave to intervene.

**SUMMARY:** Oklo Power LLC, a wholly owned subsidiary of Oklo Inc., submitted a custom combined license application for one Aurora reactor to be located at the Idaho National Laboratory in Idaho on March 11, 2020. The U.S. Nuclear Regulatory Commission (NRC) has denied the Oklo Aurora custom combined license application for failure to provide information in response to NRC staff requests for additional information (RAIs). The agency is denying the application without prejudice, and Oklo is free to resubmit its application supplemented by additional information that was previously requested.

**DATES:** A demand for a hearing or petition for leave to intervene must be filed by **[INSERT DATES 30 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]**.

**ADDRESSES:** Please refer to Docket ID **NRC-2020-0088** when contacting the NRC about the availability of information regarding this document. You may obtain publicly available information related to this document using any of the following methods:

- **Federal Rulemaking Website:** Go to <https://www.regulations.gov> and search for Docket ID **NRC-2020-0088**. Address questions about Docket IDs in Regulations.gov to Stacy Schumann; telephone: 301-415-0624; email: [Stacy.Schumann@nrc.gov](mailto:Stacy.Schumann@nrc.gov). For technical questions, contact the individual listed in the

**FOR FURTHER INFORMATION CONTACT** section of this document.

- **NRC's Agencywide Documents Access and Management System**

**(ADAMS):** You may obtain publicly available documents online in the ADAMS Public Documents collection at <https://www.nrc.gov/reading-rm/adams.html>. To begin the search, select "Begin Web-based ADAMS Search." For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-4209, 301-415-4737, or by email to [PDR.Resource@nrc.gov](mailto:PDR.Resource@nrc.gov). The ADAMS accession number for each document referenced is provided the first time that it is mentioned in this document. Oklo Power LLC, a wholly owned subsidiary of Oklo Inc., submitted the custom combined license application by letter dated March 11, 2020 (ADAMS Accession No. ML20075A001). The custom combined license application is available in ADAMS under Package Accession No. ML20075A000.

- **NRC's PDR:** You may examine and purchase copies of public documents, by appointment, at the NRC's PDR, Room P1 B35, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852. To make an appointment to visit the PDR, please send an email to [PDR.Resource@nrc.gov](mailto:PDR.Resource@nrc.gov) or call 1-800-397-4209 or 301-415-4737, between 8:00 a.m. and 4:00 p.m. (ET), Monday through Friday, except Federal holidays.

**FOR FURTHER INFORMATION CONTACT:** William Kennedy, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; telephone: 301-415-2313; email: [William.Kennedy@nrc.gov](mailto:William.Kennedy@nrc.gov).

**SUPPLEMENTARY INFORMATION:**

**I. Discussion**

The NRC staff has denied the custom combined license application for the Aurora reactor pursuant to the requirements of Part 2 of title 10 of the *Code of Federal Regulations* (10 CFR), "Agency Rules of Practice and Procedure," Section 2.108, "Denial of application for failure to supply information." The staff denied the application because, as described below, Oklo Power LLC (Oklo), a wholly owned subsidiary of Oklo Inc., did not provide sufficient information within the time specified in NRC staff

RAIs and has not otherwise provided sufficient information to address the specific questions identified in the RAIs. The NRC staff requested additional information to resolve key safety and design aspects of the licensing basis and establish a schedule for the full review of the proposed Aurora facility. Because Oklo has failed to provide substantive technical information necessary to respond to the NRC staff's RAIs, the staff can neither establish a schedule for conducting a detailed technical review of the application nor reach safety findings required to license the facility. Accordingly, the agency is ending its review of the Aurora custom combined license application and denying the application without prejudice. Oklo is free to resubmit its application supplemented by additional information in the areas described in this section.

On March 11, 2020 (85 FR 19032), Oklo submitted a custom combined license application for one microreactor, designated the Aurora, to be located at the Idaho National Laboratory in Idaho. A custom combined license application submitted under 10 CFR Part 52, Subpart C, "Combined Licenses," must contain site-specific information needed for licensing as well as the same level of design detail that would be required for a design certification application so that the NRC can make final safety findings on the design. Since March 2020, when Oklo submitted its custom combined license application, Oklo has repeatedly failed to provide substantive information in response to NRC staff RAIs on the maximum credible accident (MCA) analysis for the Aurora; the safety classification of structures, systems, and components (SSCs); and other issues needed for the NRC staff to establish a schedule for its technical review and to complete that review. These information needs were identified and communicated to Oklo in letters dated June 5, 2020 and November 17, 2020, in RAIs issued in September 2020, and at many additional times after the custom combined license application was submitted.

In a letter dated June 5, 2020 (ADAMS Accession No. ML20149K616), docketing the custom combined license application, the NRC staff communicated its plans to complete the review of the Aurora design in a two-step process. In Step 1, which the

staff estimated would last five months, the NRC staff planned to engage Oklo on four key safety and design aspects of the licensing basis: (1) the MCA analysis, which affects several aspects of the licensing basis for the Aurora; (2) the classification of SSCs, including performance requirements; (3) the implementation of Oklo's quality assurance (QA) program to the design; and (4) certain topics related to the applicability of regulations. At the conclusion of Step 1, NRC staff expected to have defined the scope of the full, detailed technical review and thus be able to develop a schedule to efficiently perform the review in Step 2.

As part of the Step 1 custom combined license application review, in September 2020 the staff asked RAIs on the subjects of the MCA analysis, safety classification of SSCs, and QA program implementation (ADAMS Accession Nos. ML20265A121, ML20265A123, ML20265A346, and ML20267A529). Oklo submitted a reply on October 30, 2020, but its reply did not provide the detailed technical information needed to respond to the staff's questions (ADAMS Package Accession No. ML20305A582). On November 17, 2020, the staff issued two letters to Oklo; one letter (ADAMS Accession No. ML20300A593) closed out the portion of the Step 1 review related to the applicability of regulations, which did not depend on the RAI reply, and the second letter (ADAMS Accession No. ML20308A677) identified areas where the RAI reply did not provide sufficient information on safety aspects of the Aurora design to enable the NRC to complete the Step 1 review and establish a schedule for a detailed technical review of the application. The second letter also stated that the NRC staff would treat the topic of QA program implementation together with safety classification of SSCs, given the relationship between the two topics, and summarized the technical information that Oklo would need to submit to support closure of the Step 1 review with respect to the MCA analysis and the safety classification of SSCs.

Oklo subsequently informed NRC staff that it would submit two generic topical reports to address these topics, including the specific questions in the RAIs. By letter dated July 2, 2021 (ADAMS Accession No. ML21184A001), Oklo submitted topical

reports, "Maximum Credible Accident Methodology," Revision 2 (ADAMS Accession No. ML21184A002), and "Performance Based Licensing Methodology," Revision 0 (ADAMS Accession No. ML21187A001), which Oklo provided to explain its novel approach to MCA analysis and SSC classification respectively. The NRC staff performed completeness reviews of the topical reports and determined that the topical reports were not sufficiently complete for the NRC staff to initiate detailed technical reviews. The NRC staff informed Oklo of the decision by two emails dated August 5, 2021 (ADAMS Accession Nos. ML21201A079 and ML21201A111), that included attachments describing the supplemental information needed for the NRC staff to begin the detailed review of each topical report (ADAMS Accession Nos. ML21201A094 and ML21201A113). At Oklo's request, the NRC staff also held public meetings with Oklo on September 1, 16, and 28, 2021 (ADAMS Accession Nos. ML21259A260, ML21266A428, and ML21293A329, respectively) to clarify the supplemental information needs. In response, Oklo submitted "Maximum Credible Accident Methodology," Revision 3 on October 5, 2021 (ADAMS Accession Nos. ML21278B097 and ML21278B098), and "Performance-Based Licensing Methodology," Revision 1 on October 19, 2021 (ADAMS Accession Nos. ML21292A326 and ML21292A327). The NRC staff performed completeness reviews of the revised topical reports and informed Oklo by letter dated January 6, 2022 (ADAMS Package Accession No. ML21307A108) the topical reports still did not contain sufficient technical information for the NRC staff to initiate detailed technical reviews.

The NRC staff has denied the Aurora custom combined license application because Oklo has repeatedly failed to submit the information needed to complete the Step 1 review of its MCA analysis and safety classification of SSCs. Oklo's October 30, 2020, RAI responses did not contain sufficient technical information. The topical reports Oklo submitted, in part, to address Step 1 of the review to support a predictable review schedule, contained information that is conceptual in nature and does not adequately describe Oklo's methodologies for the Aurora's MCA analysis or for

safety classification of SSCs. Because of Oklo's repeated failures to provide sufficient information on safety aspects of the Aurora design in response to the NRC staff's RAIs, including information related to its MCA methodology, safety classification of SSCs (including Oklo's implementation of its QA program), and the specific matters identified in the September 2020 RAIs, the NRC staff cannot establish a schedule for conducting a detailed technical review and the NRC's review of the Aurora custom combined license application cannot move forward. Oklo was notified of the NRC's denial of the custom combined license application by letter dated January 6, 2022 (ADAMS Accession No. ML21357A034).

## **II. Opportunity to Request a Hearing and Petition for Leave to Intervene**

Within 30 days after the date of publication of this notice, the applicant may demand a hearing with respect to the denial described above. A demand for hearing must be filed in accordance with the NRC's requirements specified in 10 CFR Part 2, Subpart C, except for 10 CFR 2.309(f). If the applicant demands a hearing, the demand must identify each error of fact or law that the applicant asserts is material to the denial or identify any other reason why the denial should not have been issued. The applicant must further state in the demand the specific bases, whether factual or legal, for each asserted error or other reason why the denial should not have been issued. The demand must refer to the specific statements in documents on the docket that the applicant asserts respond to the RAIs.

In addition, any person (petitioner) whose interest may be affected by this denial may, within 30 days after the date of publication of this notice, file a request for a hearing and petition for leave to intervene (petition) with respect to the denial. Petitions must be filed in accordance with the Commission's "Agency Rules of Practice and Procedure" in 10 CFR Part 2. The NRC's regulations are accessible electronically from the NRC Library on the NRC's website at <http://www.nrc.gov/reading-rm/doc-collections/cfr/>. Alternatively, a copy of the regulations is available at the NRC's PDR by appointment, located at One White Flint North, Room P1 B35, 11555 Rockville Pike (first floor),

Rockville, Maryland 20852. To schedule an appointment to visit the PDR, please email [PDR.Resource@nrc.gov](mailto:PDR.Resource@nrc.gov) or call 1-800-397-4209. If a petition is filed, the Commission or a presiding officer will rule on the petition and, if appropriate, a notice of a hearing will be issued.

As required by 10 CFR 2.309(d) the petition should specifically explain the reasons why intervention to contest the denial should be permitted with particular reference to the following general requirements for standing: (1) the name, address, and telephone number of the petitioner; (2) the nature of the petitioner's right under the Act to be made a party to the proceeding; (3) the nature and extent of the petitioner's property, financial, or other interest in the proceeding; and (4) the possible effect of any decision or order which may be entered in the proceeding on the petitioner's interest.

The petition must also set forth the specific contentions which the petitioner seeks to have litigated in the proceeding. Contentions must be limited to matters within the scope of the proceeding, i.e., why the application should not have been denied under 10 CFR 2.108. Each contention must consist of a specific statement of the issue of law or fact to be raised or controverted. In addition, the petitioner must provide a brief explanation of the bases for the contention and a concise statement of the alleged facts or expert opinion which support the contention and on which the petitioner intends to rely in proving the contention at the hearing. The petitioner must also provide references to the specific sources and documents submitted on the docket on which the petitioner intends to rely to support its position that the application should not have been denied. The contention must be one which, if proven, would entitle the petitioner to relief. A petitioner who fails to satisfy the above requirements with respect to at least one contention will not be permitted to participate as a party.

Those permitted to intervene become parties to the proceeding, subject to any limitations in the order granting leave to intervene. Parties have the opportunity to participate fully in the conduct of the hearing with respect to resolution of that party's

admitted contentions, including the opportunity to present evidence, consistent with the NRC's regulations, policies, and procedures.

Petitions must be filed no later than 30 days from the date of publication of this notice. Petitions and motions for leave to file new or amended contentions that are filed after the deadline will not be entertained absent a determination by the presiding officer that the filing demonstrates good cause by satisfying the three factors in 10 CFR 2.309(c)(1)(i) through (iii). The petition must be filed in accordance with the filing instructions in the "Electronic Submissions (E-Filing)" section of this document.

A State, local governmental body, Federally recognized Indian Tribe, or agency thereof, may submit a petition to the Commission to participate as a party under 10 CFR 2.309(h)(1). The petition should state the nature and extent of the petitioner's interest in the proceeding. The petition should be submitted to the Commission no later than 30 days from the date of publication of this notice. The petition must be filed in accordance with the filing instructions in the "Electronic Submissions (E-Filing)" section of this document, and should meet the requirements for petitions set forth in this section, except that under 10 CFR 2.309(h)(2) a State, local governmental body, or Federally recognized Indian Tribe, or agency thereof does not need to address the standing requirements in 10 CFR 2.309(d) if the facility is located within its boundaries. Alternatively, a State, local governmental body, Federally recognized Indian Tribe, or agency thereof may participate as a non-party under 10 CFR 2.315(c).

If the applicant demands a hearing, the presiding officer grants a petition to intervene, or both, the proceeding will be conducted under 10 CFR Part 2, Subpart L, unless (1) the presiding officer elects other procedures; (2) the presiding officer finds, upon motion of a party accompanying its demand or petition, that the circumstances satisfy the standards in 10 CFR 2.310(d) for conducting the proceeding under 10 CFR Part 2, Subpart G; or (3) all parties jointly agree and request that the proceeding be conducted under the procedures of another subpart of 10 CFR Part 2.

### **III. Electronic Submissions (E-Filing)**



All documents filed in NRC adjudicatory proceedings, including a demand for hearing, a petition for leave to intervene, any motion or other document filed in the proceeding prior to the submission of a demand for hearing or petition to intervene (hereinafter "petition"), and documents filed by interested governmental entities participating under 10 CFR 2.315(c), must be filed in accordance with 10 CFR 2.302. The E-Filing process requires participants to submit and serve all adjudicatory documents over the internet, or in some cases to mail copies on electronic storage media, unless an exemption permitting an alternative filing method, as discussed below, is granted. Participants may not submit paper copies of their filings unless they seek an exemption in accordance with the procedures described below. Detailed guidance on electronic submissions is located in the Guidance for Electronic Submissions to the NRC (ADAMS Accession No. ML13031A056) and on the NRC website at <https://www.nrc.gov/site-help/e-submittals.html>.

To comply with the procedural requirements of E-Filing, at least 10 days prior to the filing deadline, the participant should contact the Office of the Secretary by email at [Hearing.Docket@nrc.gov](mailto:Hearing.Docket@nrc.gov), or by telephone at 301-415-1677, to request (1) a digital identification (ID) certificate, which allows the participant (or its counsel or representative) to digitally sign documents and access the E-Submittal server for any proceeding in which it is participating; and (2) advise the Secretary that the participant will be submitting a petition or other adjudicatory document (even in instances in which the participant, or its counsel or representative, already holds an NRC-issued digital ID certificate). Based upon this information, the Secretary will establish an electronic docket for the proceeding if the Secretary has not already established an electronic docket.

Information about applying for a digital ID certificate is available on the NRC's public website at <https://www.nrc.gov/site-help/e-submittals/getting-started.html>. After a digital ID certificate is obtained and a docket created, the participant must submit adjudicatory documents in Portable Document Format. Guidance on submissions is

available on the NRC's public website at <https://www.nrc.gov/site-help/electronic-sub-ref-mat.html>. A filing is considered complete at the time the document is submitted through the NRC's E-Filing system. To be timely, an electronic filing must be submitted to the E-Filing system no later than 11:59 p.m. Eastern Time on the due date. Upon receipt of a transmission, the E-Filing system timestamps the document and sends the submitter an email confirming receipt of the document. The E-Filing system also distributes an email that provides access to the document to the NRC's Office of the General Counsel and any others who have advised the Office of the Secretary that they wish to participate in the proceeding, so that the filer need not serve the document on those participants separately. Therefore, applicants and other participants (or their counsel or representative) must apply for and receive a digital ID certificate before adjudicatory documents are filed to obtain access to the documents via the E-Filing system.

A person filing electronically using the NRC's adjudicatory E-Filing system may seek assistance by contacting the NRC's Electronic Filing Help Desk through the "Contact Us" link located on the NRC's public website at <http://www.nrc.gov/site-help/e-submittals.html>, by email to [MSHD.Resource@nrc.gov](mailto:MSHD.Resource@nrc.gov), or by a toll-free call at 1-866-672-7640. The NRC Electronic Filing Help Desk is available between 9 a.m. and 6 p.m., Eastern Time, Monday through Friday, excluding government holidays.

Participants who believe that they have good cause for not submitting documents electronically must file an exemption request, in accordance with 10 CFR 2.302(g), with their initial paper filing stating why there is good cause for not filing electronically and requesting authorization to continue to submit documents in paper format. Such filings must be submitted in accordance with 10 CFR 2.302(b)-(d). Participants filing adjudicatory documents in this manner are responsible for serving their documents on all other participants. Participants granted an exemption under 10 CFR 2.302(g)(2) must still meet the electronic formatting requirement in 10 CFR 2.302(g)(1), unless the participant also seeks and is granted an exemption from 10 CFR 2.302(g)(1).

Documents submitted in adjudicatory proceedings will appear in the NRC's electronic hearing docket, which is publicly available at <https://adams.nrc.gov/ehd>, unless excluded pursuant to an order of the presiding officer. If you do not have an NRC-issued digital ID certificate as described above, click "cancel" when the link requests certificates and you will be automatically directed to the NRC's electronic hearing dockets where you will be able to access any publicly available documents in a particular hearing docket. Participants are requested not to include personal privacy information such as social security numbers, home addresses, or personal phone numbers in their filings unless an NRC regulation or other law requires submission of such information. With respect to copyrighted works, except for limited excerpts that serve the purpose of the adjudicatory filings and would constitute a Fair Use application, participants should not include copyrighted materials in their submission.

For further details with respect to this action, see the letter from the NRC to Oklo denying the custom combined license application, dated January 6, 2022 (ADAMS Accession No. ML21357A034).

Dated: January 6, 2022.

For the Nuclear Regulatory Commission.

**Andrea D. Veil,**  
*Director,*  
*Office of Nuclear Reactor Regulation.*

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